

## Saving energy in schools

### The local authority chief officer's guide to energy efficiency

This Guide gives the monitored energy cost figures for schools (3000) in 15 Local Authorities, **so that you can see how your Authority compares with others.** It also briefly describes what action many chief officers are taking to encourage further energy savings in their schools.

There has always been a strong financial case for active management and control of energy costs. It is one of the few areas of spending that can result in cost savings year after year.

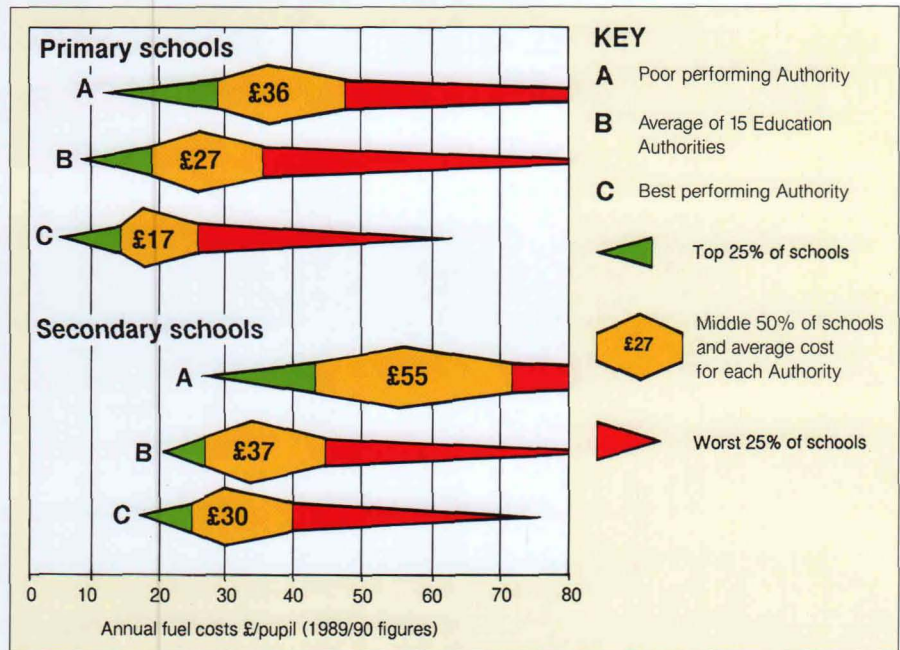
The emergence of the threat to the environment from greenhouse gases has reinforced the financial argument to reduce energy consumption.

The major way that authorities can contribute to a reduction in greenhouse gases and a cleaner environment is to follow a policy of improving the energy performance of their building stock.

Schools account for a large part of an Authority's energy bill: more than half for County Councils and just under half for Metropolitan Districts and London Boroughs (Audit Commission). They therefore deserve close examination. Many Authorities are already doing a great deal, but others have hardly started.

Many Local Authority managers argue that there are more urgent tasks than energy efficiency, but a feature of well managed organisations is that all costs are kept under control. Energy needs to be well managed to maximise its efficient use and keep costs down, just like any other resource under management control. Further, energy efficiency can be seen as an opportunity for an Authority to "market" the services of several of its departments to a wider audience.

The Audit Commission has identified key factors to success in keeping energy costs down:



Range of energy costs for schools in 15 Education Authorities

- the commitment and interest from members and chief officers
- an adequate level of investment in energy efficiency measures
- successful energy management teams
- the encouragement of users to monitor energy usage
- effective property management.

This Guide gives background information which will help to address these issues.

#### Environmental Issues

A sustained programme of investment in energy conservation will not only pay worthwhile financial dividends in future years, but also address the growing concern for local electors on the environmental

consequences of burning more fossil fuels, and the depletion of finite resources.

The consumption of energy is a major source of environmental pollution. The principal greenhouse gas, carbon dioxide, is produced when fossil fuels are burnt. Sulphur dioxide, the main cause of acid rain, is emitted when coal is burnt in power stations.

Cutting energy consumption is increasingly seen by a number of Local Authorities as an integral part of a wider environmental audit. A Local Authority can help to raise environmental standards. The need to avoid energy waste is not just a temporary green issue that will fade with time. A continuing effort is required to achieve higher environmental standards.

“Good housekeeping backed up by increased awareness can lead to 10 – 15% savings in energy costs”



Energy Efficiency Office  
DEPARTMENT OF THE ENVIRONMENT

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### Strategy and Organisation

In order to make a concerted effort to reduce a council's energy bill, there needs to be a clear policy commitment by the council, backed up by an effective allocation of resources.

Indeed, it is the effective allocation of resources that is the main evidence of a council's commitment. The guidelines set by the Audit Commission are:

- **Investment** – should be about 10% of total annual energy expenditure.
- **Manpower** – the Energy Management Unit to have one full time member of staff per £1 million of energy expenditure.

The more committed Local Authorities already achieve these guidelines.

The need to allocate investment for energy efficiency measures goes hand-in-hand with the requirements for a central Energy Management Unit (EMU) with expertise to use the funds effectively. Where EMUs exist they are usually directly responsible to a steering group of chief officers. Their activities will inevitably change as schools enter Local Management of Schools (LMS), but the key functions are likely to be:

- monitor energy consumption using modern computer based systems
- review fuel contracts and energy tariffs
- disseminate good energy management practices and support their adoption in schools
- train key staff such as caretakers
- inform schools of their performance
- investigate poor performance and recommend solutions
- identify and evaluate investment opportunities
- regularly report back on progress and advise on long-term strategies.

### Investment in Energy Saving

Good housekeeping and investment are the two keys to success in improving energy performance. Schools should be motivated to improve their housekeeping in order to keep energy costs down. To help this process, Local Authorities may like to consider providing support to staff who are responsible for managing energy in schools.

Local Authority investment in energy efficiency will help prevent energy costs becoming an ever increasing burden on its finances. Even Local Authorities with long records of energy efficiency can still find worthwhile investments where savings in energy soon repay the capital expenditure.

For most Authorities, the fact that school rolls are falling means that there will only be limited opportunity for new school buildings. Most capital expenditure is therefore concentrated on maintaining and upgrading existing schools. This is where the greatest opportunities exist

### Examples of costs in £/pupil for different levels of investment

Consumption for an average primary school in a high energy using education authority

Good housekeeping can reduce consumption by 10-15%

The effect of an energy investment programme  
(consumption for an average primary school from an education authority with a good investment record)

(consumption for an average primary school from an education authority with a good investment record)

With further investment  
(consumption of best 10% of primary schools)

for improving energy efficiency in schools often at marginal extra cost and with rapid paybacks. Whenever cost-effective, the council should have a stated policy of incorporating energy saving measures into planned maintenance and improvement work.

Where EMUs exist, they should work closely with the maintenance and technical services departments to ensure that energy saving opportunities, presented by refurbishment and maintenance work, are not missed.

EMUs can be asked to produce a priority programme of recommended investment measures. This should be regularly reviewed and updated.

### Encouragement to Schools

With the introduction of the LMS there is a greater incentive for headteachers to cut out energy waste. Savings achieved by their own efforts can now benefit the school directly. The more "energy aware" Local Authorities already encourage headteachers to appoint someone to be responsible for managing energy use and to liaise with the EMU.

Where good housekeeping is backed up by a campaign to increase awareness of energy costs in schools, savings of 10-15% are common. Some enthusiastic teachers and governors have cut costs still further.

The potential for the school to make significant savings with minimum capital outlay is therefore real and should be encouraged. In many schools, however, there will be a need for 'pump priming'. Local Authorities can provide this in a number of ways including advice on where to start, some in-house training, and continuing close liaison with the school as they progress.

### Useful Organisations and Publications

**The Energy Efficiency Office (EEO)** of the Department of the Environment has 11 Regional Energy Efficiency Officers who can offer free advice on how to set about improving

the energy performance of your Authorities' buildings. Contact 0171 276 6200 for the name and address of your regional officer.

**Audit Commission** – Occasional Paper No.11, Cutting energy consumption in local government, gives facts and figures to support the case for investment in energy efficiency and examines the barriers to progress. Contact Audit Commission, 1 Vincent Square, London, SW1P 2PN.

**The Department for Education (DFE)** also publishes papers on energy efficiency in schools. Contact the Publications Centre on 0181-533 2000 for a list of current publications.

**BRECSU** at the Building Research Establishment, manages the EEO Best Practice programme for improving energy efficiency in buildings. BRECSU is currently collaborating with DFE to prepare guidance material on energy efficiency in schools, such as this Guide. Others in this series include:

#### Energy Consumption Guides:

Saving Energy in Schools – The Headteacher's and Governor's Guide to energy. ECON 15

Saving Energy in Schools – The "School Energy Manager's" Guide to energy efficiency. ECON 16

#### Good Practice Guides

Good Housekeeping in Schools – A Guide for School Staff Governors and Pupils. GPG 29

Managing Energy in Schools – A Guide for Headteachers and Governors. GPG 39

If you would like a current list of BRECSU's EEO Best Practice publications, please contact: Enquiries Bureau, BRECSU, Garston, Watford, WD2 7JR.

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